

powder inside the can and reducing the gap between successive cans in the spray area from the gap between cans in the welding machine, thereby minimizing the escape of powder from the interior of the cans. The reduction of the gap is indicated by "d1" and "d2" in FIGURE 1, and can be accomplished by the brakes 22.

Takeda is the primary reference cited by the Examiner. Takeda discloses a method of forming a thick coated film *only on the weld joint* of a can, not the remaining interior wall, and deals with a lesser problem of air pollution due to scattering of sprayed material. Furthermore, Takeda considers coating of the remaining interior of the can other than the weld seam, one object of the present claimed invention, part of the pollution problem. See, for example, column 1, lines 45-48 of Takeda. Takeda discloses solving these problems by suspending powder in a poor solvent thereof to create a novel slurry paint, and directing the novel slurry paint only on the seam. Takeda's solution is to use the slurry paint.

Accordingly, Takeda does not teach or suggest reducing the gap between cans in a spray area to minimize escape of spray from the interior of the can when coating the entire interior wall of the can. One advantage of the claimed invention - the use of powder dispersed throughout the interior of the can to coat the entire circumference of the interior wall, is a detriment to be avoided in Takeda. Takeda discloses the slurry to *avoid* the use of powder, noting other problems with powder, such as clogging of nozzles, (Takeda, column 2, lines 58-68 and column 3 lines 1-3). Takeda thus teaches away from one aspect of the claimed invention, namely, the spraying of powder.

The secondary reference cited by the Examiner, Sendzimir, is directed to coating one face of a continuously advancing steel strip by first electrolytically depositing a thin primary coating of metal from an ionized bath onto one face, cleansing and drying that face, and subsequently coating the face with a metal by

melting the metal and distributing the melted metal in micro particulate form with a rotating spray head. The advancing steel strip is temporarily deflected into a cylindrical outline with the face to be coated innermost, and the rotating spray head located coaxially with the cylindrical outline. Sendzimir is not directed to the problem addressed by the invention, and accordingly does not remedy the above noted deficiencies of Takeda. Sendzimir does not teach or suggest the use of a spray powder to coat the interior of a can while reducing the gap between successive cans in spray area from the gap therebetween in a welding machine.

Accordingly, Takeda and Sendzimir, neither taken individually nor in combination, teach or suggest the invention as now claimed, wherein a *powder* is used to coat the *inner surface about its entire circumference* of a can in a spray area receiving the cans in succession from a welding machine, and further wherein *the gap between successive cans in the spray area is reduced from that at the welding machine for minimizing the escape of powder from the interior of the can.*

Furthermore, claim 1 specifically recites spraying a powder more or less uniformly onto the interior wall of the can over its entire circumference. As stated by the Examiner on page 2 of the outstanding Office Action, " the primary reference (Takeda) discloses a method of coating *weld joints* in a metal container body by application of spray coating *to the weld area* and recovering coating material to prevent scattering of the coating material" (Italics added). In the Examiner's opinion, "it would have been obvious to one having ordinary skill in this art at the time the invention was made to substitute the rotating nozzle of the secondary reference, Sendzimir, for the nozzle of the primary reference.... ."

The Applicant respectfully points out that such combination is improper and not suggested by the art. The substitution renders the primary reference inoperable for its intended purpose and thus one of ordinary skill is not

motivated to make the proposed substitution. The intended purpose of the primary reference is to coat only a selected area - the weld joint. Coating other portions of the can wall is a problem to be avoided. (Takeda, column 1, lines 45-48) Substitution of the rotating nozzle into the primary reference results in a coating applied to the *entire* interior of the metal container and creating considerable unwanted dispersion of spray that the primary reference seeks to avoid. Accordingly, motivation to make the combination proposed by the Examiner is lacking. As stated in MPEP Section 2141.01:

If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed combination.

See also MPEP Section 2145 (c), stating that although the combining of the teachings of references does not require that the specific structures be combinable,

the "combination cannot change the *principle of operation of the primary reference* or *render the reference inoperable for its intended purpose* . See MPEP Section 2143.01

The invention as claimed defines a process for spraying a *powder* to coat the *entire inner surface* of a container. The principle of operation of the primary reference is the spraying of a liquid slurry to *avoid* complications associated with powder, and to spray slurry only on the weld seam. Not only does the proposed substitution render the primary reference inoperable, the use of a

powder spray would change a significant principle of operation of the primary reference.

Accordingly, the Applicant respectfully submits that as amended the claimed invention patentably distinguishes over the cited art. Neither Takeda nor Sendzimir teaches or suggests the claimed invention, which as amended recites the reduction of the gap between successive cans in the spray area for spraying a powder using a rotating spray head.

CONCLUSION

This response attends to all issues raised in the Office Action mailed September 30, 1997. As amended, claim 1 and claims 2, 3 and 4 dependent therefrom patentably distinguish from the cited art. Accordingly, the Applicants respectfully request that the rejection of the claims be reconsidered and withdrawn and that the application be allowed and passed to issue.

Respectfully submitted,

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